

### **Remarks**

This is intended as a full and complete response to the Restriction Action dated September 12, 2008, having an extended period for response set to expire on December 12, 2008. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-35 are pending in the application and remain pending following entry of this response. Applicant submits that the amendments and new claim do not introduce new matter.

Claims 1-35 stand restricted under PCT Rule 13.1. The Examiner alleges that this application contains claims directed to more than one species of the generic invention. The alleged species are as follows:

reactive elements comprise iron (Claim 7);  
reactive elements comprise zinc (Claim 8 and 10);  
reactive elements comprise magnesium (Claim 9).

Applicant provisionally elects, with traverse, the claim(s) directed to iron (claim 7) for examination.

However, Applicant traverses this restriction requirement and respectfully requests the Examiner withdraw the restriction requirement and examine all claims for at least the following reasons.

There are two criteria, that must BOTH be satisfied for a proper requirement for restriction between patentably distinct inventions: (A) The inventions must be independent; AND (B) There must be a serious burden on the examiner if restriction is not required. (MPEP § 803). Applicant submits that the Examiner has not properly established or satisfied the criteria for a proper requirement for restriction.

While the Examiner has properly construed claims 7-10 as being species of a generic claim 6, there is no serious burden to examine all species. The species are directed to particular elements used as catalysts/reactants in a system utilizing in-diffusion of optical fiber to detect changes in a chemical environment. Applicant submits that, in the unlikely event the Examiner does find art that teaches any such system, the art will likely list relevant elements contemplated.

Each of the species share a common technical feature that is not found in any art offered by the Examiner. While the states that:

“...The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the common technical feature is a system comprising an optical fiber arranged to receive light from an optical source and reaction elements or catalysts adapted to react with constituents of the environment to create a gas. Such system is known in the art, see e.g. Weber et al. (US 5,490,490) disclosing on-board gas composition sensor for internal combustion engine exhaust gases comprising fiber-optic sensor (18 and 16) and catalytic converter, which interacts with the environment and produces gases to be detected.”

Applicant respectfully submits, however, that US 5,490,490 (*Weber*) does not teach the common technical feature (shared by the identified species). In fact, US 5,490,490 makes no mention, whatsoever, of in-diffusion. In contrast, *Weber* relies on a completely different technique whereby “oxide ceramic exposed to the exhaust gas emits an optical fluorescence signal responsive to oxygen content in the exhaust gas...” While a fiber may be employed to transmit excitation light and/or carry the optical fluorescence signal, there is not teaching of properties of the fiber being altered by gas diffusion, as recited in the present claims.

For these reasons, Applicant submits that the generic claims, from which these species depend, are allowable, that the restriction requirement is improper, and respectfully requests withdrawal of the restriction requirement.

Conclusion

Having addressed all issues set out in the Restriction Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully requests that the claims be allowed.

Dated: December 12, 2008

Respectfully submitted, and  
**S-signed pursuant to 37 C.F.R. 1.4,**

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